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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,297	10/24/2001	Masayuki Hoshino	L9289.01181	2432

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EXAMINER	
TORRES, JUAN A	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/936,297	Applicant(s) HOSHINO ET AL.	
	Examiner Juan A. Torres	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2-11* is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 October 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03-31-03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The Information Disclosure Statement makes reference to a Japanese patent that has an unusual number (last reference). In the information received that number is not found. Instead there is another Japanese patent submitted that is not listed in the Information Disclosure Statement. The Examiner has cancelled the unusual patent number and has entered the received patent number not listed.

Specification

The abstract of the disclosure is objected to because in line 4 of the abstract the recitation "CAL signal" is suggested to be changed to "calibration (CAL) signal". Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: in page 7 line 12 of the disclosure the recitation "CAL signal" is suggested to be changed to "calibration (CAL) signal".

Appropriate correction is required.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the:

a) Calibration signal transmitter comprising: spreading means for spreading a calibration signal using a signal-specific spreading code; and transmitting means for transmitting the spread calibration signal for each unit frame for a predetermined time.

b) Intermittent calibration apparatus comprising: receiving means for receiving a signal resulting from multiplexing the calibration signal sent by the calibration signal transmitter with a communication signal spread using a signal-specific spreading code in a same frequency band; extracting means for extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code; calibration means capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal; and demodulating means for carrying out demodulation processing on the extracted communication signal using the result of the calibration processing.

c) Intermittent calibration apparatus comprising: receiving means for receiving a signal resulting from multiplexing a communication signal spread using a signal-specific spreading code and sent, and a calibration signal spread using a signal-specific spreading code and sent for each unit frame for a predetermined time in a same frequency band; extracting means for extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code; calibration means capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal; and demodulating means for carrying out demodulation

processing on the extracted communication signal using the result of the calibration processing.

d) Calibration method comprising: a transmitting step of transmitting a calibration signal spread using a signal-specific spreading code for each unit frame for a predetermined time; a receiving step of receiving a signal resulting from multiplexing the calibration signal sent with a communication signal spread using a signal-specific spreading code in a same frequency band; an extracting step of extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code; a calibration step capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal; and a demodulating step of carrying out demodulation processing on the extracted communication signal using the result of the calibration processing.

Must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters in figure 1 "10, 20, 30, 11, 12, 13, 14, 15, 16, 17, and 18" and reference characters in figure 2 "101, 110, 120, 102, 103, 104, 105, 106, 107, 108 and 109" have both been used to designate the same figure, because figure 1 and figure 2 are identical. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takakusaki (EP 881704). Takakusaki discloses a calibration signal transmitter comprising: spreading means for spreading a calibration signal using a signal-specific spreading code (column 3 lines 334-39); and transmitting means for transmitting the spread calibration signal for each unit frame for a predetermined time (column 3 lines 334-39).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ståhla (US 5936569). Ståhla discloses a calibration signal transmitter comprising: spreading means for spreading a calibration signal using a signal-specific spreading code (figure 1 column 2 lines 61-65); and transmitting means for transmitting the spread calibration signal for each unit frame for a predetermined time (figure 1 column 2 lines 65-67).

Allowable Subject Matter

Claims 2-11 are allowed over prior art (if the above objections are overcome).

The following is an examiner's statement of reasons for allowance: claims 2-11 are allowed because the references cited fail to teach, as applicant has, an intermittent

calibration apparatus comprising receiving means for receiving a signal resulting from multiplexing the calibration signal sent by the calibration signal transmitter (that has spreading means for spreading a calibration signal using a signal-specific spreading code and transmitting means for transmitting the spread calibration signal for each unit frame for a predetermined time) with a communication signal spread using a signal-specific spreading code in a same frequency band, extracting means for extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code, calibration means capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal, and demodulating means for carrying out demodulation processing on the extracted communication signal using the result of the calibration processing; an intermittent calibration apparatus comprising: receiving means for receiving a signal resulting from multiplexing a communication signal spread using a signal-specific spreading code and sent, and a calibration signal spread using a signal-specific spreading code and sent for each unit frame for a predetermined time in a same frequency band, extracting means for extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code; calibration means capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal, and demodulating means for carrying out demodulation processing on the extracted communication signal using the result of the calibration processing; and a calibration method comprising: a transmitting

step of transmitting a calibration signal spread using a signal-specific spreading code for each unit frame for a predetermined time; a receiving step of receiving a signal resulting from multiplexing the calibration signal sent with a communication signal spread using a signal-specific spreading code in a same frequency band; an extracting step of extracting the communication signal and the calibration signal from the received signal through despreading processing using the spreading code; a calibration step capable of executing calibration processing using the extracted calibration signal in parallel with a communication using the extracted communication signal; and a demodulating step of carrying out demodulation processing on the extracted communication signal using the result of the calibration processing, as the applicant has claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAT
1-12-2005

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